

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 01-225318

(43)Date of publication of application : 08.09.1989

(51)Int.Cl.

H01L 21/30
G03C 1/00
G03F 7/00

(21)Application number : 63-052347

(71)Applicant : MATSUSHITA ELECTRIC WORKS LTD

(22)Date of filing : 04.03.1988

(72)Inventor : KAMI HIRONORI

(54) FORMATION OF RESIST LAYER

(57)Abstract:

PURPOSE: To form a thin and uniformly thick resist layer and, e.g., to form an accurate mask for impurity region formation use on an uneven face of a semiconductor substrate by a method wherein, before the resist layer is formed, a substratum layer used to level and flatten an uneven part of the semiconductor substrate is formed.

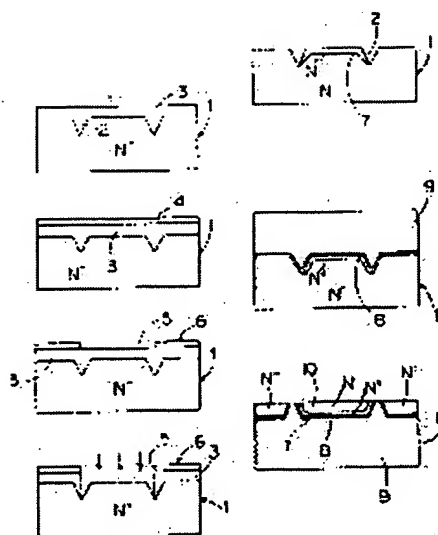
CONSTITUTION: V-grooves 2 are formed on the surface of an N-type silicon semiconductor substrate 1. Then, a liquid spin-coating material for SiO₂ film formation use is spin-coated on the whole surface; it is dried; a

substratum layer 3 is formed on the surface of the substrate 1; the surface is flattened. A resist layer 4 is formed on it; while a pattern film is applied, the layer is

irradiated with light and exposed to light; it is removed selectively; a window 5 is opened.

Since the resist layer 4 is thin and uniformly thick, an exposure operation can be executed satisfactorily; the window 5 can be opened as desired; a minute mask 6 can be completed. In succession, the substratum layer 3 is etched and removed selectively by using the mask 6.

An N-type impurity is ion-implanted; the mask 6 and the substratum layer 3 are removed; an insulating layer 8 is formed on the surface of the semiconductor substrate 1; a polysilicon support layer 9 is formed on it; the rear of the semiconductor substrate 1 is polished; the



bottom of the grooves 2 is exposed; thus an insulating-layer isolation substrate (D) is completed.

LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

Copyright (C); 1998,2000 Japan Patent Office